WHAT IS CLAIMES IS:

1. A standard voltage generation circuit comprising:

a standard voltage generation circuit body for generating a standard voltage;

a standard voltage stabilization capacitor for stabilizing the standard voltage; and

a standard voltage rapid stabilizer for rapidly stabilizing the standard voltage.

2. A standard voltage generation circuit as defined in Claim 1, wherein said standard voltage rapid stabilizer comprises a rapid charging/discharging current source which performs rapid charging or rapid discharging to/from the standard voltage stabilization capacitor.

3. A standard voltage generation circuit as defined in Claim 2, wherein said rapid charging/discharging current source comprises:

a bias current source for outputting a predetermined current; and

a current mirror circuit including

a first conductivity type first transistor having a source connected to a first voltage, a drain connected to the bias current source, and a gate and the drain being short-circuited, and

a first conductivity type second transistor having a

source connected to the first voltage, a drain connected to the standard voltage stabilization capacitor, and a gate connected to the gate of the first conductivity type first transistor.

4. A standard voltage generation circuit as defined in Claim 2 wherein said rapid charging/discharging current source comprises:

a bias current source for outputting a predetermined current; and

a current mirror circuit including

a second conductivity type first transistor having a source connected to a second voltage, a drain connected to the bias current source, and a gate and the drain being short-circuited, and

a second conductivity type second transistor having a source connected to the second voltage, a drain connected to the standard voltage stabilization capacitor, and a gate connected to the gate of the second conductivity type first transistor.

5. A standard voltage generation circuit as defined in Claim 1 further comprising:

a sub standard voltage generation circuit for generating a sub standard voltage;

a voltage detection comparator for comparing the standard voltage generated by the standard voltage generation circuit body with the sub standard voltage generated by the sub standard

voltage generation circuit, and outputting the result of comparison; and

a stop circuit for stopping the operation of the standard voltage rapid stabilizer for charging or discharging the standard voltage stabilization capacitor, according to the result of comparison by the voltage detection comparator.

6. A standard voltage generation circuit as defined in Claim 5, wherein said sub standard voltage generation circuit is not provided with a capacitor for stabilizing the sub standard voltage.

7. A standard voltage generation circuit as defined in Claim 5, wherein said sub standard voltage generation circuit comprises a resistance type potential divider.

8. A standard voltage generation circuit comprising:

a standard voltage generation circuit body for generating a standard voltage, and outputting the standard voltage from a first terminal;

a first capacitor element having both ends being connected to a first constant voltage and charged during a standby period, and one of the both ends being connected to the first constant voltage while the other end being connected to a third voltage that is higher than the standard voltage during a normal

operation period; and

a second capacitor element having both ends being connected to a second constant voltage and charged during the standby period, and one of the both ends being connected to the second constant voltage while the other end being connected to a fourth voltage that is lower than the standard voltage during the normal operation period;

wherein the capacitance ratio between the first capacitor element and the second capacitor element is a value that makes a voltage at a common node converge to a voltage in the vicinity of the standard voltage, said common node is a point where the one end of the first capacitor element that is charged to the third voltage and the one end of the second capacitor element that is charged to the fourth voltage are connected; and

at transition from the standby period to the normal operation period, the first terminal outputting the standard voltage and the common node are changed from the non-conducting states to the conducting states.

9. A standard voltage generation circuit comprising:

a standard voltage generation circuit body for generating a standard voltage, and outputting the standard voltage from a first terminal;

a first conductivity type eighth transistor having a source, a drain, and a gate,

said source being connected to a first constant voltage that is different from the standard voltage by at least a threshold voltage of the transistor,

during a standby period, said gate and said drain being electrically connected to each other, and a difference in voltages between the gate and the source being biased to a predetermined voltage that is higher than the threshold voltage, and

during a normal operation period, said source and said drain being electrically connected to each other;

a first conductivity type seventh transistor having a source connected to the source of the first conductivity type eighth transistor, and a drain connected to the drain of the first conductivity type eighth transistor, said seventh transistor electrically disconnecting the source and the drain of the first conductivity type eighth transistor during the standby period, and electrically connecting them during the normal operation period;

a first conductivity type sixth transistor having a source connected to the drain of the first conductivity type eighth transistor, and a drain connected to the gate of the first conductivity type eighth transistor, said sixth transistor electrically connecting the gate and the drain of the first conductivity type eighth transistor during the standby period, and electrically disconnecting them during the normal operation

period;

a second conductivity type third transistor having a source connected to a second constant voltage, and a drain connected to the gate of the first conductivity type eighth transistor, said third transistor biasing a difference in voltages between the gate and the source of the first conductivity type eighth transistor to a predetermined voltage larger than the threshold voltage of the first conductivity type eighth transistor during the standby period, and being turned off during the normal operation period;

a first conductivity type ninth transistor having a source connected to the first constant voltage and a drain connected to the first terminal, said ninth transistor being turned on during the standby period, and turned off during the normal operation period; and

a first conductivity type fifth transistor having a source connected to the first terminal, and a drain connected to the gate of the first conductivity type eighth transistor, said fifth transistor being brought into conduction during at least a period until a difference in voltages between the gate of the first conductivity type eighth transistor and the first terminal attains a predetermined value, at the time of transition from the standby period to the normal operation period.

10. A standard voltage generation circuit as defined in Claim 9,

wherein said standard voltage generation circuit body comprises:

a constant current sour for outputting a predetermined current; and

a first conductivity type transistor having a source connected to the first constant voltage, a drain connected to the constant current source, and a gate and the drain being short-circuited;

wherein the gate of the first conductivity type transistor outputs the standard voltage.

11. A standard voltage generation circuit comprising:

a standard voltage generation circuit body for generating a standard voltage, and outputting the standard voltage from a first terminal;

a reference standard voltage generation circuit for generating a predetermined range of reference voltage including the standard voltage;

a switch that is turned off during a standby period, and turned on during a normal operation period;

a capacitor element having one end connected to the first terminal through the switch, and the other end connected to a fifth fixed voltage;

a voltage detection circuit for comparing the reference voltage with a voltage at the one end of the capacitor element, and outputting the result of comparison; and

a control circuit for controlling charging/discharging of the capacitor element according to the result of detection by the voltage detection circuit so that the voltage at the one end of the capacitor element approaches the standard voltage.

12. A standard voltage generation circuit as defined in Claim 11 wherein

said reference standard voltage generation circuit generates two reference voltages including a reference voltage higher than the standard voltage, and a reference voltage lower than the standard voltage;

said control circuit comprises:

a first conductivity type transistor having a drain connected to the one end of the capacitor element, and a source connected to a power supply voltage, and a gate connected to the output of the voltage detection circuit; and

a second conductivity type transistor having a drain connected to the one end of the capacitor element, a source connected to a ground voltage, and a gate connected to the output of the voltage detector circuit; and

said voltage detection circuit comprises two comparators for

outputting the result of detection so as to turn on the second conductivity type transistor and turn off the first conductivity type transistor when the voltage at the one end of the capacitor element becomes equal to or higher than the

reference voltage that is higher than the standard voltage, and

outputting the result of detection so as to turn on the first conductivity type transistor and turn off the second conductivity type transistor when the voltage at the one end of the capacitor element becomes equal to or lower than the standard voltage.

13. A standard voltage generation circuit as defined in Claim 11 wherein

said reference standard voltage generation circuit generates a reference voltage in the vicinity of the standard voltage;

said control circuit comprises

a first conductivity type transistor having a drain connected to the one end of the capacitor element, a source connected to the power supply voltage, and a gate connected to the output of the voltage detector circuit,

a second conductivity type transistor having a drain connected to the one end of the capacitor element, a source connected to the ground voltage, and a gate connected to the output of the voltage detection circuit; and

said voltage detection circuit comprises a hysteresis comparator that compares the voltage at the one end of the capacitor element with the reference voltage, and outputs "High" when the voltage at the one end of the capacitor element is equal to or higher than the reference voltage and outputs "Low" when

the voltage is equal to or lower than the reference voltage.

14. A standard voltage generation circuit comprising:

a standard voltage generation circuit body for generating a standard voltage, and outputting the standard voltage from a first terminal;

a reference standard voltage generation circuit for generating two reference voltages including a reference voltage higher than the standard voltage, and a reference voltage lower than the standard voltage;

a switch that is turned off during a standby period, and turned on during a normal operation period;

a capacitor element having one end connected to the first terminal through the switch, and the other end connected to a fifth fixed voltage; and

a voltage detection control circuit comprising

a first conductivity type transistor having a source connected to the one end of the capacitor element, a gate connected to the reference voltage that is lower than the standard voltage, and a drain connected to a ground voltage, and

a second conductivity type transistor having a source connected to the one end of the capacitor element, a gate connected to the reference voltage that is higher than the standard voltage, and a drain connected to a power supply voltage.

15. A standard voltage generation circuit as defined in Claim 14 wherein said reference standard voltage generation circuit comprises:

a sub standard voltage generation circuit for outputting the reference voltage in the vicinity of the standard voltage from a first output terminal;

a bias circuit comprising

a first conductivity type fourteenth transistor having a source connected to the power supply voltage, and a gate and a drain being short-circuited, and

a second conductivity type eighth transistor having a source connected to the ground voltage, a drain connected to the drain of the first conductivity type fourteenth transistor, and a gate and the drain being short-circuited;

a first conductivity type thirteenth transistor having a source connected to the power supply voltage, and a gate connected to the gate of the first conductivity type fourteenth transistor of the bias circuit;

a second conductivity type seventh transistor having a source connected to the ground voltage, and a gate connected to the gate of the second conductivity type eighth transistor of the bias circuit;

a second conductivity type sixth transistor having a drain connected to the drain of the first conductivity type thirteenth transistor, a source connected to the first output terminal and

biased to a voltage in the vicinity of the standard voltage, and a gate and the drain being short-circuited; and

a first conductivity type twelfth transistor having a drain connected to the drain of the second conductivity type seventh transistor, a source connected to the first output terminal and biased to a voltage in the vicinity of the standard voltage;

wherein a predetermined current is passed through the second conductivity type sixth transistor and the first conductivity type twelfth transistor to generate a reference voltage higher than the standard voltage at the gate of the second conductivity type sixth transistor, and a reference voltage lower than the standard voltage at the gate of the first conductivity type twelfth transistor.